

Amendments to the Claims:

1-14. (Canceled)

15. (New) A turbine housing assembly for an exhaust-gas-driven turbocharger, comprising:

a sector-divided turbine housing defining a generally annular chamber structured and arranged to surround a turbine wheel, a plurality of circumferentially spaced dividing walls extending generally radially inwardly from a radially outer wall of the chamber and dividing the chamber into a plurality of separate angular sectors each of which occupies a fractional part of a circumference of the chamber, each sector of the chamber at a radially inward side thereof having an axial length;

a vane assembly for guiding flow from the chamber into the turbine wheel, the vane assembly comprising a ring of circumferentially spaced vanes that include dividing vanes and additional vanes mounted on a fixed structure of the turbine housing assembly, the dividing vanes corresponding in number to the number of dividing walls, each dividing vane forming an extension of one of the dividing walls and extending generally radially inwardly from the dividing wall and terminating at a trailing edge of the dividing vane, the additional vanes being located circumferentially between the dividing vanes; and

a variable-geometry mechanism comprising a tubular piston disposed radially inward of the chamber and axially slidable relative to the chamber between a fully open position and a closed position in which a fractional portion of the axial length of the sectors is blocked by the piston, wherein the piston and the vanes overlap radially and at least the dividing vanes are received in axially extending slots in the piston when the piston is in the closed position;

wherein the dividing vanes extend fully across the axial length of the sectors so that the sector-division of the turbine housing is preserved when the piston is in the fully open position, and the additional vanes extend along less than the axial length of the sectors and are axially located such that when the piston is in the closed position a portion of the sectors remains open and the additional vanes extend fully across said portion, and when the piston is in the fully open position there is a space between ends of the additional vanes and an end of the piston.

16. (New) The turbine housing assembly of claim 15, wherein the slots in the piston extend radially inwardly from a radially outer side of the piston for a radial distance less than a full radial thickness of the piston, such that the slots do not go all the way through to a radially inner side of the piston.

17. (New) The turbine housing assembly of claim 15, wherein the additional vanes and piston are arranged such that in the closed position of the piston, an end of the piston abuts ends of the additional vanes.

18. (New) The turbine housing assembly of claim 15, wherein the dividing vanes and additional vanes are mounted on a ring-shaped member separate from the turbine housing.

19. (New) A turbine for an exhaust-gas-driven turbocharger, comprising:

a turbine wheel;

a sector-divided turbine housing defining a generally annular chamber structured and arranged to surround the turbine wheel, a plurality of circumferentially spaced dividing walls extending generally radially inwardly from a radially outer wall of the chamber and dividing the chamber into a plurality of separate angular sectors each of which occupies a fractional part of a circumference of the chamber, each sector of the chamber at a radially inward side thereof having an axial length;

a vane assembly for guiding flow from the chamber into the turbine wheel, the vane assembly comprising a ring of circumferentially spaced vanes that include dividing vanes and additional vanes mounted on a fixed structure of the turbine housing assembly, the dividing vanes corresponding in number to the number of dividing walls, each dividing vane forming an extension of one of the dividing walls and extending generally radially inwardly from the dividing wall and terminating at a trailing edge of the dividing vane, the additional vanes being located circumferentially between the dividing vanes; and

a variable-geometry mechanism comprising a tubular piston disposed radially inward of the chamber and axially slidable relative to the chamber between a fully open position and a closed position in which a fractional portion of the axial length of the sectors is blocked by the piston, wherein the piston and the vanes overlap radially and at least the dividing vanes are received in axially extending slots in the piston when the piston is in the closed position;

wherein the dividing vanes extend fully across the axial length of the sectors so that the sector-division of the turbine housing is preserved when the piston is in the fully open position, and the additional vanes extend along less than the axial length of the sectors and are axially located such that when the piston is in the closed position a portion of the sectors remains open and the additional vanes extend fully across said portion, and when the piston is in the fully open position there is a space between ends of the additional vanes and an end of the piston.

20. (New) The turbine of claim 19, wherein the slots in the piston extend radially inwardly from a radially outer side of the piston for a radial distance less than a full radial thickness of the piston, such that the slots do not go all the way through to a radially inner side of the piston.

21. (New) The turbine of claim 19, wherein the additional vanes and piston are arranged such that in the closed position of the piston, an end of the piston abuts ends of the additional vanes.

22. (New) The turbine of claim 19, wherein the dividing vanes and additional vanes are mounted on a ring-shaped member separate from the turbine housing.

23. (New) A turbine for an exhaust-gas-driven turbocharger, comprising:  
a turbine wheel;

a sector-divided turbine housing defining a generally annular chamber structured and arranged to surround the turbine wheel, a plurality of circumferentially spaced dividing walls extending generally radially inwardly from a radially outer wall of the chamber and dividing the chamber into a plurality of separate angular sectors each of which occupies a fractional part of a circumference of the chamber, each sector of the chamber at a radially inward side thereof having an axial length;

a variable-geometry mechanism comprising a tubular piston disposed radially inward of the chamber and axially slidable relative to the chamber between a fully open position and a closed position in which a fractional portion of the axial length of the sectors is blocked by the piston;

a vane assembly for guiding flow from the chamber into the turbine wheel, the vane assembly comprising a ring of circumferentially spaced vanes that include dividing vanes and

additional vanes affixed to an end of the piston and projecting axially therefrom, the dividing vanes corresponding in number to the number of dividing walls, each dividing vane forming an extension of one of the dividing walls and extending generally radially inwardly from the dividing wall and terminating at a trailing edge of the dividing vane, the additional vanes being located circumferentially between the dividing vanes; and

a fixed structure having slots through which at least the dividing vanes extend when the piston is moved toward the closed position.

24. (New) The turbine of claim 23, wherein the additional vanes are axially shorter than the dividing vanes.

25. (New) The turbine of claim 23, wherein the additional vanes are the same length as the dividing vanes and the fixed structure includes slots for the additional vanes.

26. (New) The turbine of claim 23, wherein the fixed structure comprises a heat shroud.